

6BE6

Pentagrid Converter

7-PIN MINIATURE TYPE

GENERAL DATA

Electrical:

Heater, for Unipotential Cathode:

Voltage (AC or DC) 6.3 \pm 10% volts
Current at 6.3 volts. 0.3 amp

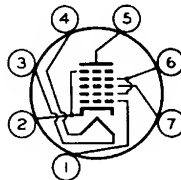
Direct Interelectrode Capacitances:

	Without External Shield	With External Shield ^a	
Grid No.3 to all other elec- trodes (RF input)	7	7	μ f
Plate to all other electrodes (Mixer input)	8	13	μ f
Grid No.1 to all other elec- trodes (Oscillator input) . .	5.5	5.5	μ f
Grid No.3 to plate.	0.3 max.	0.25 max.	μ f
Grid No.3 to grid No.1. . . .	0.15 max.	0.15 max.	μ f
Grid No.1 to plate.	0.1 max.	0.05 max.	μ f
Grid No.1 to cathode & grid No.5 .	3	3	μ f
Cathode & grid No.5 to all other electrodes except grid No.1. .	15	20	μ f

Mechanical:

Operating Position. Any
Maximum Overall Length. 2-1/8"
Maximum Seated Length 1-7/8"
Length, Base Seat to Bulb Top (Excluding tip) . . 1-1/2" \pm 3/32"
Diameter. 0.650" to 0.750"
Dimensional Outline See *General Section*
Bulb. T5-1/2
Base. Small-Button Miniature 7-Pin (JEDEC No.E7-1)
Basing Designation for BOTTOM VIEW. 7CH

Pin 1-Grid No.1
Pin 2-Cathode,
Grid No.5
Pin 3-Heater
Pin 4-Heater



Pin 5-Plate
Pin 6-Grid No.2,
Grid No.4
Pin 7-Grid No.3

CONVERTER

Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE 330 max. volts
GRID-No.3 (CONTROL-GRID) VOLTAGE:
Negative-bias value 55 max. volts
Positive-bias value 0 max. volts
GRIDS-No.2 & No.4 (SCREEN-GRID)
SUPPLY VOLTAGE. 330 max. volts
GRIDS-No.2 & No.4 VOLTAGE 110 max. volts

← Indicates a change.



RADIO CORPORATION OF AMERICA
Electron Tube Division
Harrison, N. J.

DATA
5-61

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CATHODE CURRENT	15.5	max.	ma
GRIDS-No.2 & No.4 INPUT	1.1	max.	watts
PLATE DISSIPATION	1.1	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode	200	max.	volts
Heater positive with respect to cathode	200 ^b	max.	volts

Characteristics:

With separate excitation^c

Plate Voltage	100	250	volts
Grid-No.3 Voltage	-1.5	-1.5	volts
Grids-No.2 & No.4 Voltage	100	100	volts
RMS Grid-No.1 (Oscillator Grid) Voltage.	10	10	volts
Grid-No.1 Resistor.	20000	20000	ohms
Plate Resistance (Approx.).	0.4	1	megohm
Conversion Transconductance	455	475	μ hos
Grid-No.3 Voltage (Approx.) for			
conversion transconductance (μ hos) =			
10.	-30	-30	volts
100	-6	-6	volts
Plate Current	2.6	2.9	ma
Grids No.2 & No.4 Current	7	6.8	ma
Grid-No.1 Current	0.5	0.5	ma
Cathode Current	10.1	10.2	ma

Oscillator Characteristics (Not Oscillating):

With grids No.2 & No.4 connected to plate

Plate and Grids-No.2 & No.4 Voltage	100	volts
Grid-No.3 Voltage	0	volts
Grid-No.1 Voltage	0	volts
Amplification Factor between grid No.1 and		
grids No.2 & No.4 connected to plate.	20	
Transconductance between grid No.1 and		
grids No.2 & No.4 connected to plate.	7250	μ hos
Cathode Current	25	ma
Grid-No.1 Voltage (Approx.) for plate μ a = 10.	-11	volts

^a With external shield JEDEC No.316 connected to cathode.

^b The dc component must not exceed 100 volts.

^c The characteristics shown with separate excitation correspond very closely with those obtained in a self-excited oscillator circuit operating with zero bias.

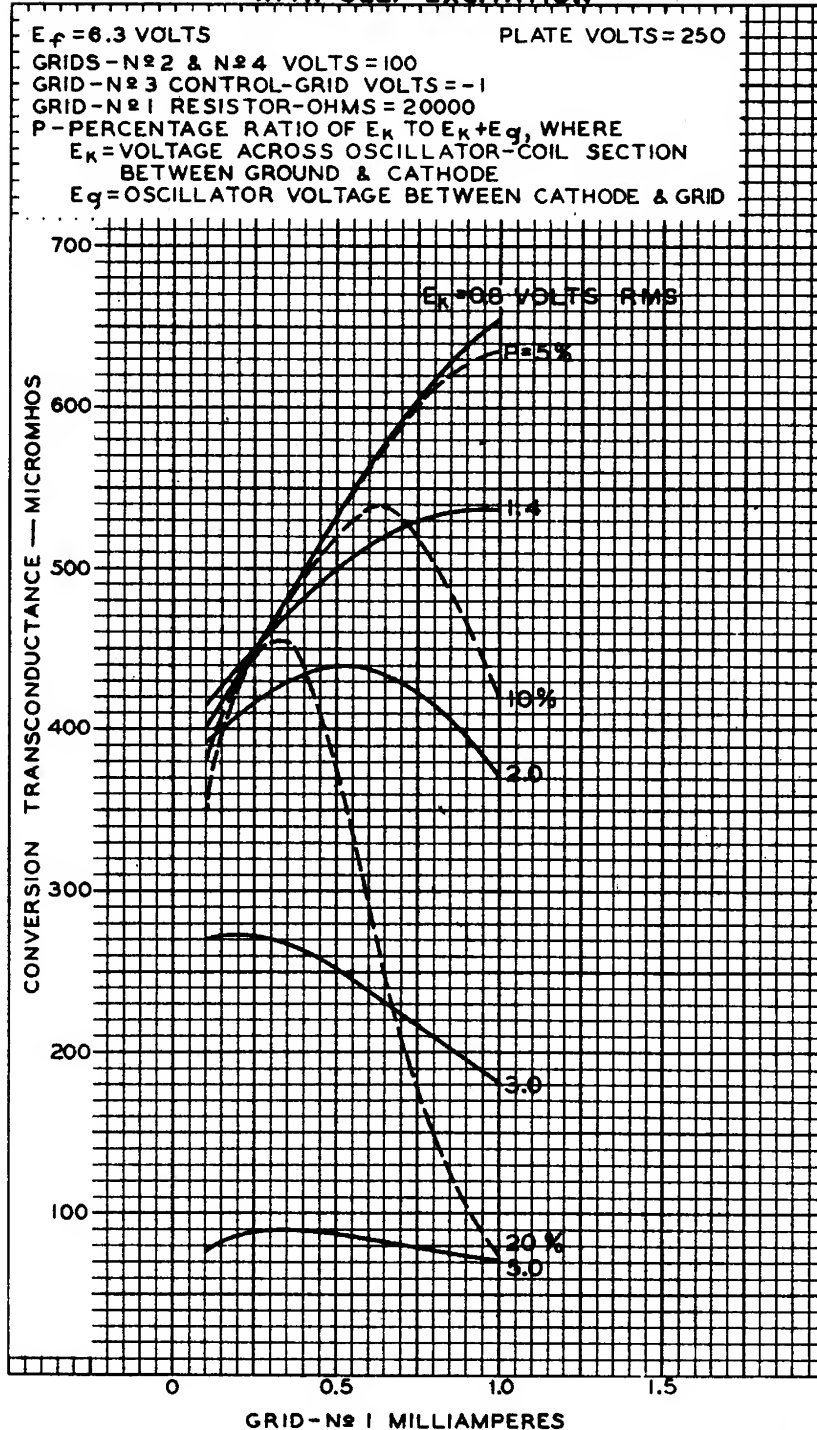




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OPERATION CHARACTERISTICS WITH SELF-EXCITATION



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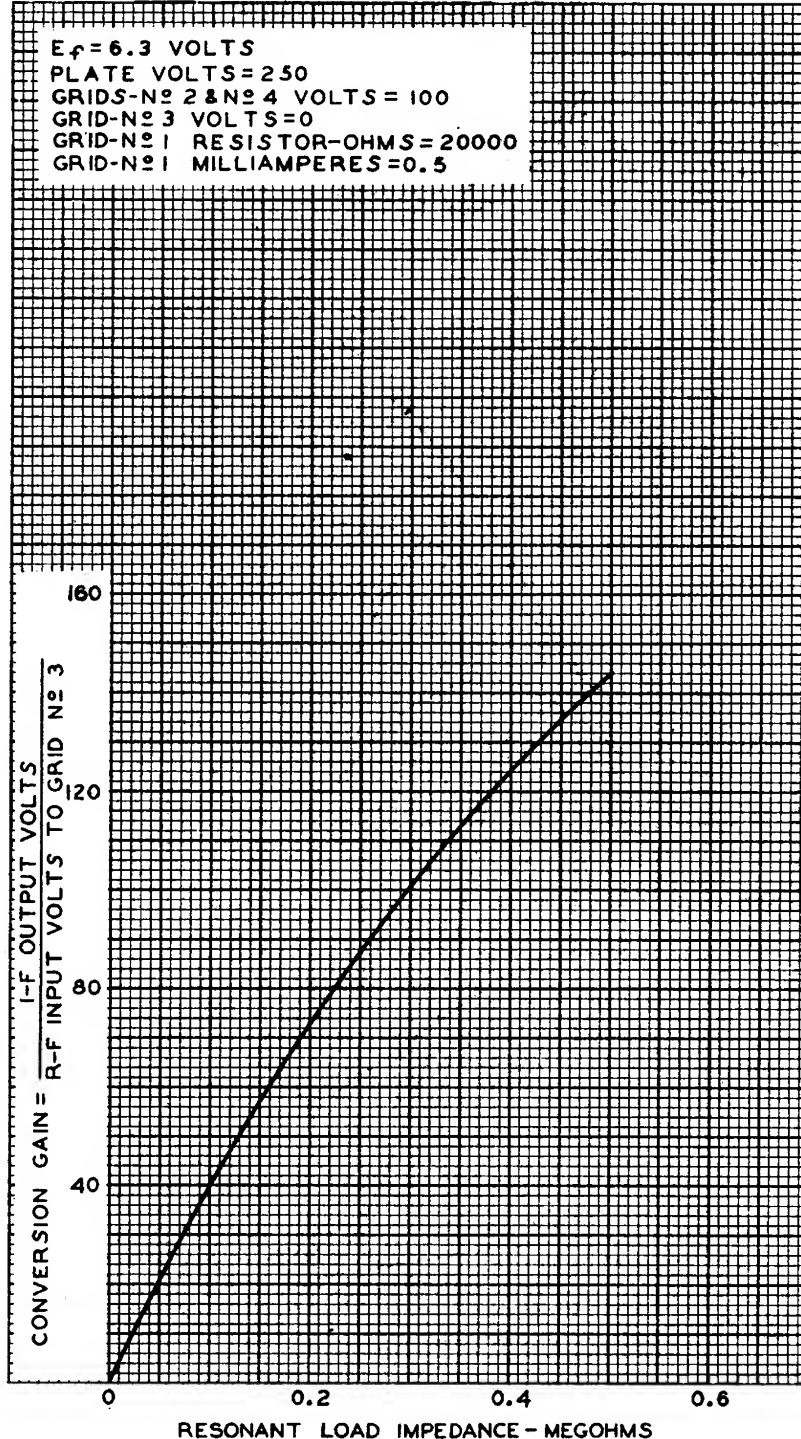
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OPERATION CHARACTERISTIC WITH SELF-EXCITATION



OCT. 16, 1945

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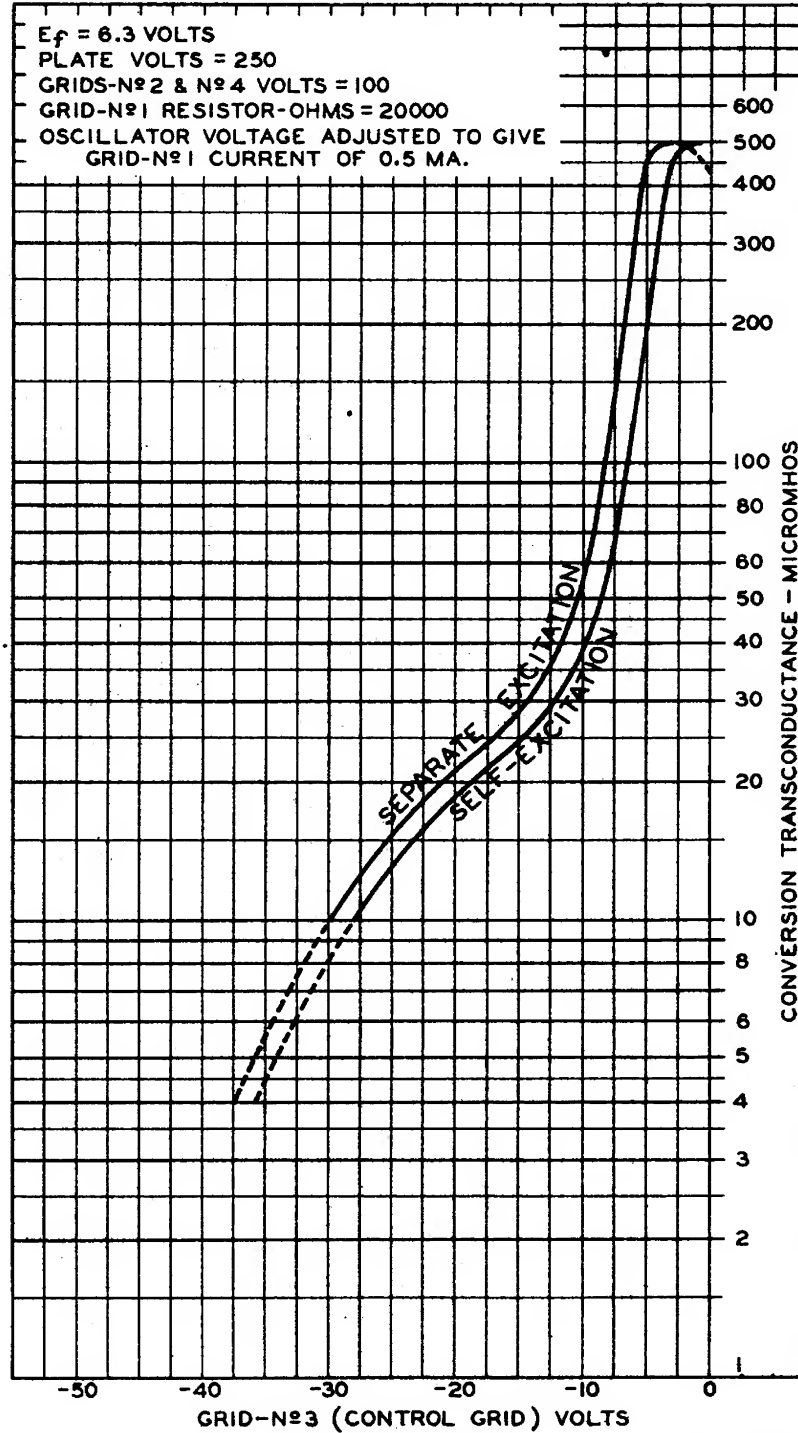
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OPERATION CHARACTERISTICS



SEPT. 26, 1945

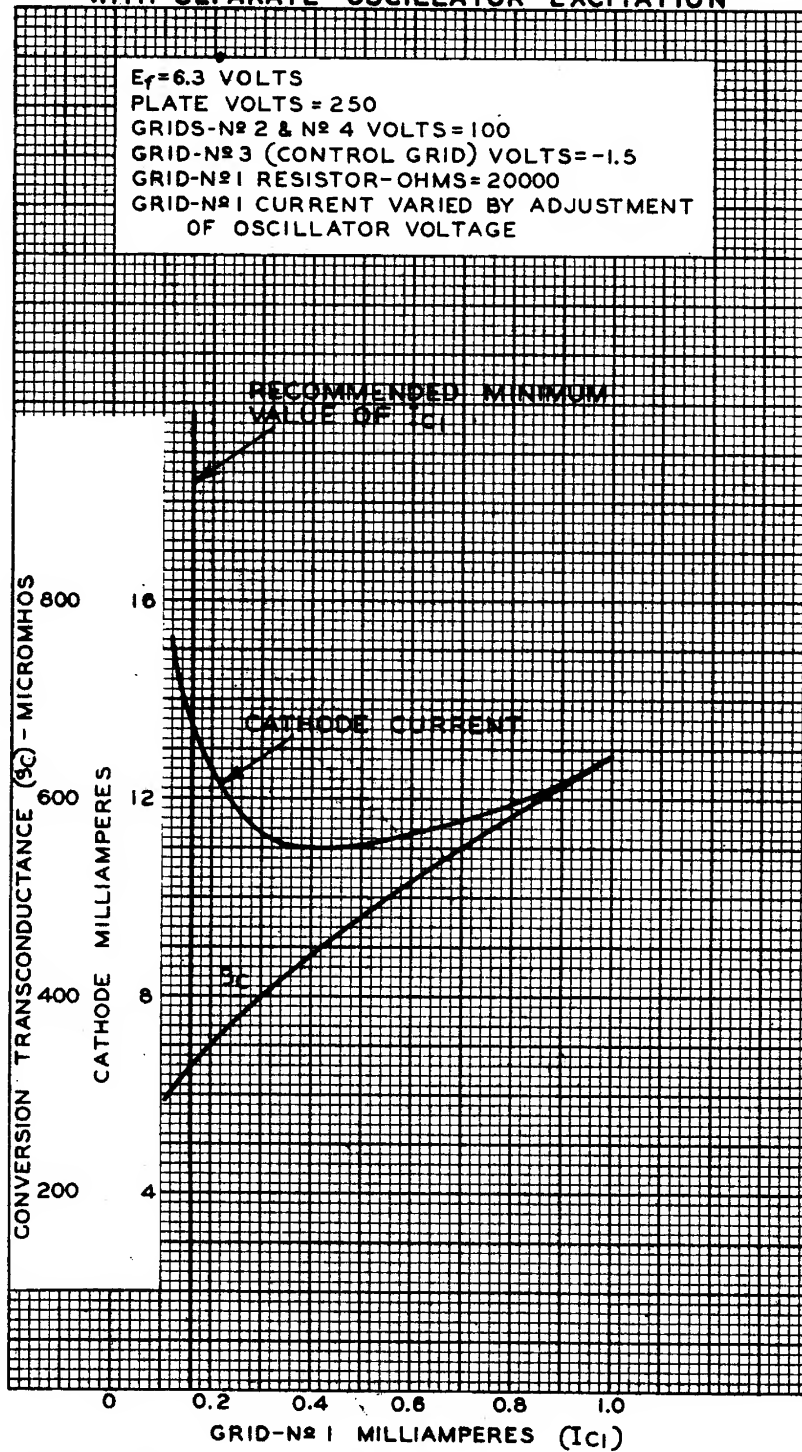
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OPERATION CHARACTERISTICS
WITH SEPARATE OSCILLATOR EXCITATION

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